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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology and Plant Quarantine

Forest Insect Laboratory,
Fort Collins, Colorado,
October 15, 1936.

MEMORANDUM ON THE EXAMINATION OF THE DENDROCTONUS EPIDEMIC ON TABBY MOUNTAIN, UINTA NATIONAL FOREST, UTAH.

The fall survey on Tabby Mountain, conducted by Lowell Farmer with a Forest Service survey crew, indicated that some 400 infested lodgepole pines are present on an area of about 800 acres. This is a reduction from the 520 trees treated last spring, but is a much higher percent of reinfestation than had been anticipated. A heavy reinfestation also occurred on this small area the previous year, following control. On other areas in the Uinta Forest where control has been carried on the past two years a good reduction in infestation apparently has been obtained, the fall survey indicating that no control will be needed except on Tabby Mountain.

A limited examination was made on Tabby Mountain on September 22, in company with Mr. Bentley from the office in Provo. The flat top on this mountain, covering an area of only about two sections, has a fairly heavy stand of lodgepole pine mixed with spruce and fir. The lodgepole is largely confined to the mountain top, with other species in some of the draws on the slopes. The mountain is somewhat isolated, lying near the east boundary of the Forest, and the nearest stands of lodgepole are reported as being some 7 or 8 miles to the west and northwest. All the known lodgepole stands on Tabby Mountain were covered in the control work last

spring. This included a small area on private land, apparently below the rim, which had not been covered the previous year and contained a heavy infestation.

It appears unlikely that the repeated infestation is coming from outside sources, because of the isolated location and the fact that the beetle epidemic in other areas has been reduced to a low stage. The present infestation has probably resulted from beetles within the area itself. Although the source of the reinfestation could not be determined definitely, there are probably several factors contributing to the present condition.

Farmer reported that the survey crew had noted a number of trees which had been missed in the control work last spring. This is no doubt partially due to the fact that many of the infested trees were difficult to detect and had been missed by the spotters when they covered the area the previous fall. Many of the old trees produce practically no pitch tubes, a condition noticed by Ranger Adair last year, and the only evidence of attack on these trees is the boring dust in the bark crevices and around the base of the tree. The necessity of using untrained CCC labor in spotting may also have been a factor in missing trees, unless these men were especially conscientious. Snow on the ground during one day of the spotting last fall obscured much of the evidence of attack on that day. However, this part of the area was gone over again by the burners during control work the next spring and a number of unmarked trees found and treated. Trees left untreated on the area may have been an important factor in the present reinfestation.

It appears that the use of a trained spotting crew in this area would

be of much assistance, if it is possible to obtain men of this type for the work when the area is covered again. It will be necessary to examine each tree closely for boring dust, and possibly for entrance holes in the bark if the spotting is done in early spring, to make certain that none of the infested trees are being missed.

Many of the mature trees in the stand are tall, probably running from 60 to 75 feet in height. Considering the heavy epidemic conditions it is likely that the infestation runs high up the bole on many of these tall trees. In a few of the felled and burned trees examined the beetles had attacked as high as 40 to 50 feet. Although a considerable number of large trees were felled in the control operations last spring, it appears likely that many of those burned standing may have had considerable beetle infestation above the burn, which was not destroyed. The burning operation was apparently given considerable attention last spring and a good beetle kill was evidently obtained in the portion of the bole treated. However, there is usually little mortality above the highest point reached by the oil, even though the bark is blackened above this height. Where the fire crowns in standing trees the beetle brood in the upper bole is not always destroyed, unless the limbs are dense enough to hold the fire against the bole itself for a time.

To eliminate the possibility of missing beetles in the upper bole of infested trees it would seem advisable on the Tabby Mountain area to fell all tall trees and make certain that the entire infested length is thoroughly burned. The shorter trees, where the infested length can be reached from the ground, could be burned standing as usual.

During the inspection on September 22 several small groups of attacked lodgepole were found which had already started to fade. The brood in these trees was in the advanced larval stage, indicating that the trees may have been attacked early. Several other trees with the usual normal green foliage showed broods only in the early larval stage. It is uncertain just what degree of discoloration these early fading trees will have attained by next spring, although it seems that they would still be readily distinguishable from the old red tops. However, it would be well to take particular note of these trees if the spotting is done next spring, to make sure that none of the men would pass them up for abandoned trees. This possible difficulty would not be encountered with fall spotting since these trees are more conspicuous than those with green foliage.

While it is believed that all the lodgepole type on Tabby Mountain was located last spring, it would be well to examine all timbered draws below the rim which have not been looked into thus far, to be certain that these do not contain infested lodgepole or limber pine. With all such areas checked the possibility of beetles entering the control area from nearby untreated stands would be definitely eliminated.

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